

ATTORNEY DOCKET NO. WEST14-00014
U.S. SERIAL NO. 09/839,726
PATENT

PENDING CLAIMS:

1. (Previously Presented) Apparatus for a communication station operable in a wireless communication system at least to receive first and second successive data signals transmitted thereto by a first subscriber station and a second subscriber station, respectively, within a plurality of subscriber stations, said apparatus comprising:

a first demodulator selectably coupled to receive at least one of the first data signals and the second data signals transmitted to the communication station by the first subscriber station and by the second subscriber station, respectively;

at least a second demodulator also selectably coupled to receive at least one of the first data signals and the second data signals transmitted to the communication station by the first subscriber station and by the second subscriber station, respectively; and

a controller, coupled to said first demodulator and to said at least second demodulator in a feedback arrangement, said controller alternately selecting the first data signal for application to said first demodulator and the second data signal for application to said second demodulator.

ATTORNEY DOCKET NO. WEST14-00014
U.S. SERIAL NO. 09/839,726
PATENT

2. (Original) The apparatus of Claim 1 wherein the wireless communication system comprises a fixed wireless access system, wherein the communication station comprises a base station of the fixed wireless access system in which the data signals transmitted thereto by the first subscriber station comprise first uplink burst data signals and the data signals transmitted thereto by the second subscriber station comprise second uplink burst data signals, said first demodulator embodied at a first modem.
3. (Original) The apparatus of Claim 2 wherein said second demodulator is embodied at a second modem.
4. (Original) The apparatus of Claim 1 wherein the at least the second subscriber station comprises a plurality of subscriber stations and wherein said controller selects to which of said first demodulator and said second demodulator that the first data signals and the at least second data signals are applied according to a selected pattern.

ATTORNEY DOCKET NO. WEST14-00014
U.S. SERIAL NO. 09/839,726
PATENT

5. (Original) The apparatus of Claim 4 wherein the selected pattern according to which said first demodulator and said second demodulator receive the first and at least second data signals comprise alternately coupling said first demodulator and said second demodulator to receive, selectably, the first and at least second data signals communicated by alternating ones of the plurality of subscriber stations.
6. (Original) The apparatus of Claim 1 wherein the first and at least second data signals transmitted to the communication station by the first and at least second subscriber stations are transmitted in bursts of selected time durations and wherein said controller further determines times of arrival and time directions of the bursts which form the data signals.
7. (Original) The apparatus of Claim 1 wherein said controller further comprises a memory portion, said controller further for maintaining profiles associated with each of the first and at least second data signals transmitted upon first and at least second channels, respectively, the profiles stored at the memory portion of said controller.

ATTORNEY DOCKET NO. WEST14-00014
U.S. SERIAL NO. 09/839,726
PATENT

8. (Original) The apparatus of claim 7 wherein the profiles maintained at the memory portion of said controller comprise at least one channel-related parameter associated with the first and at least second channels upon which the first and at least second data signals are communicated, respectively.

9. (Original) The apparatus of claim 8 wherein said first demodulator and said second demodulator each include equalizer portions for equalizing the at least one of the first and second data signals selectably applied to said first demodulator and said second demodulator, respectively.

10. (Original) The apparatus of claim 9 wherein the filter weight values form portions of the profiles maintained by said controller and stored at the memory portion thereof.

11. (Original) The apparatus in claim 7 wherein the profiles maintained at the memory portion of said controller comprise at least one signal-related parameter associated with the first and at least second data signals, respectively.

ATTORNEY DOCKET NO. WEST14-00014

U.S. SERIAL NO. 09/839,726

PATENT

12. (Original) The apparatus of claim 11 wherein the first and at least second data signals are characterized by modulation indexes, and wherein values of the modulation indexes form portions of the profiles maintained by said controller and stored at the memory portion of said controller.

13. (Original) The apparatus of claim 11 wherein the first and at least second data signals are characterized by modulation orthogonalizations and wherein values of the modulation orthogonalizations form portions of the profiles maintained by said controller and stored at the memory portion of said controller.

14. (Original) The apparatus of claim 11 wherein the first and at least second data signals include FEC (forward error correction), the FEC characterized by FEC parameters and wherein values of the FEC parameters form portions of the profiles maintained by said controller and stored at the memory portion of said controller.

ATTORNEY DOCKET NO. WEST14-00014

U.S. SERIAL NO. 09/839,726

PATENT

15. (Original) The apparatus of claim 7 wherein the communication station to which the first and at least second data signals are transmitted by the first and at least second subscriber stations, respectively, exhibits antenna diversity provided by a first antenna transducer and at least a second antenna transducer, the first and at least second data signals transduced by the first and at least second antenna transducer, respectively, combined utilizing antenna combining parameters, and wherein the antenna combining parameters form portions of the profiles maintained by said controller and stored at the memory portion of said controller.

16. (Original) The apparatus of Claim 7 wherein profiles maintained by said controller and stored at the memory portion thereof comprise values of Band timing adjustments by which to adjust the first and at least second data signals.

17. (Original) The apparatus of Claim 7 wherein profiles maintained by said controller and stored at the memory portion thereof comprise values of residual carrier adjustments by which to adjust the first and at least second data signals.

ATTORNEY DOCKET NO. WEST14-00014
U.S. SERIAL NO. 09/839,726
PATENT

18. (Previously Presented) A method for acting upon first and second successive data signals transmitted to a communication station operable in a wireless communication system by a first subscriber station and at least a second subscriber station, said method comprising:

selecting at which of a first demodulator and at least a second demodulator to apply at least one of the first data signals and the second data signals, wherein the first and second successive data signals and any subsequent data signals are alternately applied to the first and second demodulators;

demodulating the at least one of the first and at least second data signals at the first demodulator when the first demodulator is selected during said operation of selecting; and

demodulating the at least one of the first and at least second data signals at the second demodulator when the second demodulator is selected during said operation of selecting.

19. (Original) The method of claim 18 wherein selections made during said operation of selecting are made according to a selected pattern.

20. (Original) The method of claim 18 further comprising the operation of maintaining profiles associated with each of the first and at least second data signals transmitted upon the first and at least second channels, respectively, and wherein said operations of demodulating further comprise accessing the profiles.